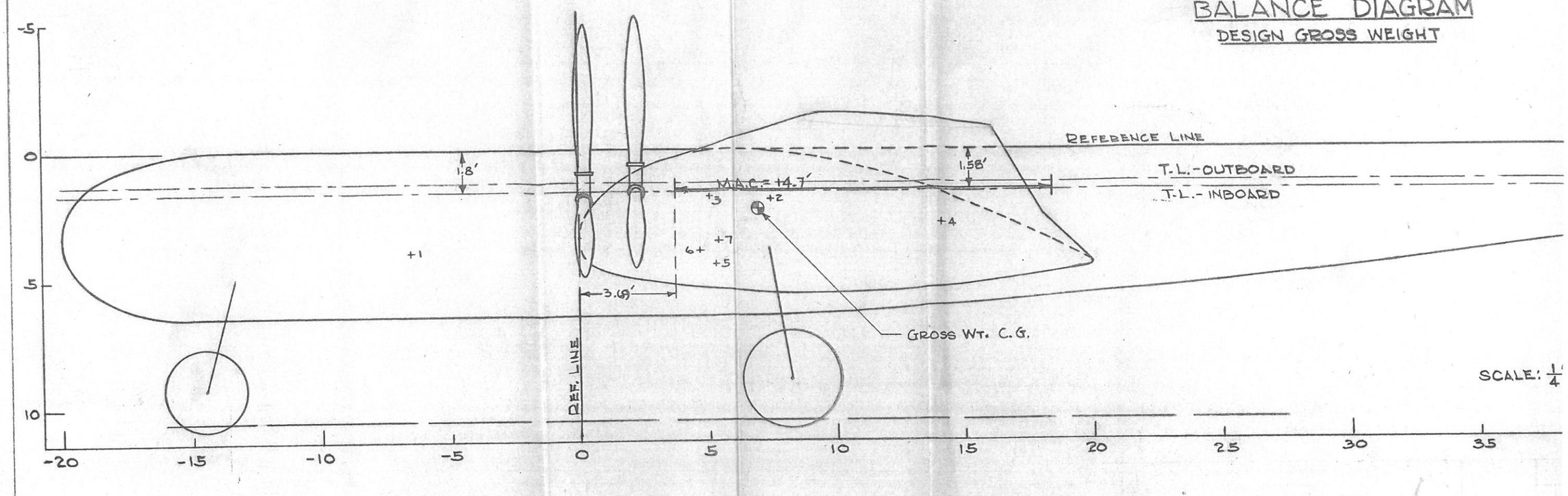
BALANCE DIAGRAM

DESIGN GROSS WEIGHT



HORIZONTAL C.G.

REFERENCE LINE = L.E.W. (ROOT SECTION)
M.A.C. = 14.7 FT.
L.E. M.A.C. AFT OF REFERENCE LINE = 3.69 FT.

$$C.G. = \frac{6.91 - 3.69}{14.7} = \frac{3.22}{14.7} = 21.9\% \text{ M.A.C.}$$

VERTICAL C.G.

REFERENCE LINE = TOP LINE OF FUSELAGE
BELOW REFERENCE LINE = 2.27 FT.
M.A.C. BELOW REFERENCE LINE = 1.58 FT.
C.G. BELOW M.A.C. = 2.27 − 1.58 = 0.69 FT

$$C.G. \text{ IN } \% \text{ M.A.C.} = \frac{0.69}{14.7} = 4.7\% \text{ M.A.C.}$$

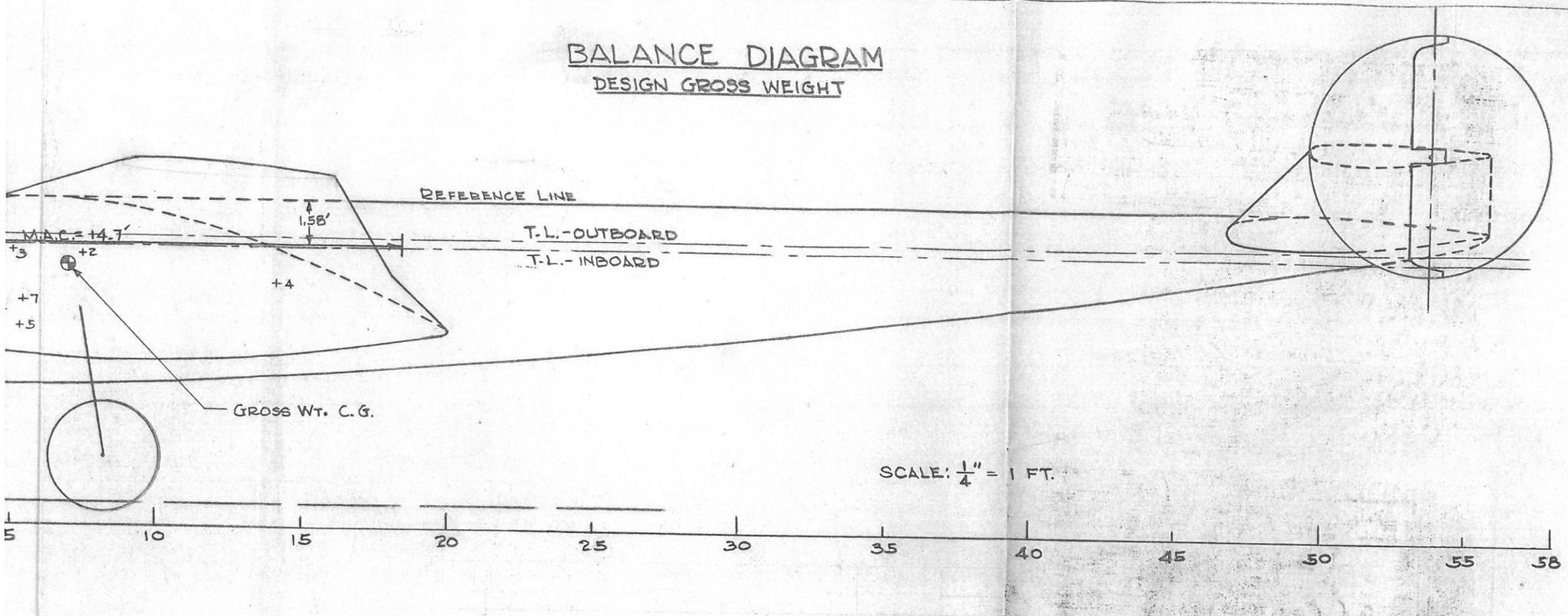
NO.	ITEM	WEIGHT POUNDS
1*	CREW & PARACHUTES	1800
2	FUEL (2800 GALS. AT 6#/GAL.)	16800
3	OIL (175 GALS. AT 7.5#/GAL.)	1312
4*	FLEXIBLE GUNS	964
5*	BOMB INSTALLATION	2669
6*	PYROTECHNICS	108
7*	EQUIPMENT	1284
	DESIGN USEFUL LOAD	24937
	WEIGHT EMPTY	31965
	DESIGN GROSS WEIGHT	56902

* FOR DETAIL BREAKDOWN, SEE PAGE 15

TRIM

BALANCE DIAGRAM

DESIGN GROSS WEIGHT



) FT.
.9 % M.A.C.

FT
A.C.

NO.	ITEM	WEIGHT POUNDS	HORIZONTAL ARM	HORIZONTAL MOMENT	VERTICAL ARM	VERTICAL MOMENT
1*	CREW & PARACHUTES	1800	-6.52	-11736	3.95	7110
2	FUEL (2800 GALS. AT 6#/GAL.)	16800	7.4	124320	1.9	31920
3	OIL (175 GALS. AT 7.5#/GAL.)	1312	5.0	6560	1.8	2362
4*	FLEXIBLE GUNS	964	14.04	13532	2.84	2733
5*	BOMB INSTALLATION	2669	5.36	14027	4.52	12073
6*	PYROTECHNICS	108	4.6	497	3.9	421
7*	EQUIPMENT	1284	5.36	6879	3.51	4511
	DESIGN USEFUL LOAD	24937		154079		61130
	WEIGHT EMPTY	31965		239301		67796
	DESIGN GROSS WEIGHT	56902	6.91	393380	2.27	128926

* FOR DETAIL BREAKDOWN, SEE PAGE 15